

Course Policy SP11.55221 General Physics I 2004

INSTRUCTOR: Larry Tankersley OFFICE: Ricketts 305, x36653

OFFICE HOURS: MWF6 or by arrangement tank@usna.edu LAB: A-16, x36695

CLASS: MWF25 Tu2356 RESEARCH: Th, all day in DC

TEXT: Giancoli

COURSE OBJECTIVES:

- To learn the fundamentals of physical mechanics
- To appreciate the experimental basis of the theory
- To develop physical models for abstract principles
- To apply mathematical methods to physics
- To develop general problem solving skills
- To prepare students for technical courses and for a technical military

COURSE GRADE:

Homework	13%
Laboratory	12%
Hour Tests	40%
Final Exam	35%
Quizzes and Class Participation	up to 10%
Total scaled to 100%	

AND

- A requires both homework and lab grade averages greater than 70%
- B requires both homework and lab grade averages greater than 60%
- C requires both homework and lab grade averages greater than 50%
- D requires both homework and lab grade averages greater than 40%

HOMEWORK: Problem assignments will be given on the web. They are due on the date that the problems appear as listed on an assignment sheet. Please work with and assist your classmates. **DO NOT** simply copy problems. All solutions will use full vector notation and technique. Units are required. The goal is to develop new methods and understanding, not just to get the answer in the back of the book. Attempt prose statements of answers using the terms of each problem. **All multiple page assignments must be stapled. Your name and section number should be in an upper corner of the first page.** Homework submitted after your instructor has started grading the set will be penalized or rejected. You must solve the homework problems thoughtfully in order to perform well on the tests. I am a source of helpful hints. **VISIT:** <http://physics.usna.edu>

LAB WORK: Plan to complete the PreLab each week prior to the lab meeting and to arrive with printed lab instructions for the week. Your grade will be based on your laboratory skills as well as the quality of your reports with its summary page. Every student should keep a laboratory record with complete entries for all experiments attempted. You should expect to lose points on late submissions. The laboratory computer systems are tools. You are the masters. Be prepared to follow instructions closely and then to adapt procedures to most effectively collect and analyze data to reveal the true behavior of nature. Your goal is to test the validity of relationships that we claim are 'laws of nature'. Any recording special or innovative observations will be regarded favorably.

TESTS: Tests are to be taken on the scheduled dates during the class period. You must inform me **before** you miss a test. Makeup tests are *slightly* more difficult than the regular ones.

EXTRA INSTRUCTION: I like it. You should take advantage of it. EI can cover math skills and other related topics. You may find EI of interest even if you are one of the stronger students.

SPECIAL NOTE: There are several models for improving the mastery of physics by students in an introductory course. These models suggest interactive questioning during lectures, detailed organized solution techniques for problems, greater emphasis on the conceptual underpinnings of physics and group learning activities. Math skills development will also be emphasized. We will experiment with techniques and approaches during the term. You should evaluate each one carefully. You should continue to utilize the ones that help you even after the emphasis in class has shifted to other approaches. Where possible you should adapt the approaches to your other courses. Keep notes on your progress as I will ask you for evaluations of the various approaches.

E-MAIL: I use e-mail to give you early notice of assignments, to announce EI sessions, and to give hints to ease your way along the path to homework solutions. Please check your mail often. We will see about Blackboard.

Revision Date: August 18, 2004